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REMARKS

Claims 1 through 21 and new Claims 22 through 24 are pending in the application.

Claim 1 has been amended to reflect that the films of the invention advantageously exhibit a Yellowness Index of less than or equal to 30. Support for Claim 1 can be found in the Application-as-filed, for example on Page 4, lines 10 through 12.

Claim 1 has been further amended to reflect that the films of the invention advantageously incorporate coloring agent that consists essentially of rutile-type titanium dioxide, optical brightener(s) and blue dye(s). Support for this amendment can be found in the Application-as-filed.

Claims 5, 8, 9, 11 and 12 have been amended to correct a typographical error.

Claim 7 has also been amended to conform to United States practice.

Claim 8 has also been amended to reflect that the films of the invention advantageously incorporate flame retardants that are dissolved within, i.e. are soluble in, the thermoplastic film. Support for this amendment can be found in the Application-as-filed on Page 15, lines 8 through 10.

Claim 10 has been canceled without prejudice or disclaimer to the filing of continuing applications thereon.

Claims 14 through 18 have been canceled in response to the restriction requirement memorialized within the Office Action of June 5, 2003. Applicants

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respectfully submit that Claims 14 through 18 have been canceled without prejudice or disclaimer to the filing of continuing applications thereon.

Claims 22 through 14 have been added to complete the record for examination and to highlight particularly advantageous embodiments of the invention.

Claim 22 is more particularly directed to films exhibiting a whiteness of 90 % or more in the absence of dye. The films of Claim 22 are formed from crystallizable thermoplastic that further includes pigment consisting essentially of rutile-type titanium dioxide and at least one optical brightener film. The films of Claim 22 further exhibit a transparency of up to 40% and a Yellowness Index of less than or equal to 30. Support for Claim 22 can be found in the Application-as-filed, for example on Page 4, lines 7 through 14.

Claims 23 and 24 are directed films incorporating particularly advantageous UV absorbers. Support for Claim 22 can be found in the Application-as-filed, for example in Claim 7 as originally filed.

Reexamination and reconsideration of this application, withdrawal of all rejections, and formal notification of the allowability of the pending claims are earnestly solicited in light of the following remarks.

Claim Objection

The nonmenclature within Claim 10 remains objected to. Applicants' Representative greatly appreciates Exhibits A and B provided by the Examiner. Applicants respectfully cancel Claim 10, however, without further addressing the merits of the rejection, solely in order to advance prosecution of the case.

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Accordingly, Applicants respectfully submit that the outstanding objection has been obviated.

Submission of Terminal Disclaimer

Claims 1 through 6, 13 and 19 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claims of United States Patent No. 6,521,351 ("US 351") to Murschall et al. in view of United States Patent No. 6,627,695 ("US 695") to Murschall et al.

Solely to advance prosecution of the case and without addressing the merits of the rejection, Applicants respectfully submit herewith a terminal disclaimer, as suggested by the Examiner. More particularly, Applicants submit herewith a terminal disclaimer to be charged to Deposit Account 50-2193 that disclaims the terminal part of any patent granted on the above-identified application extending beyond the expiration date of the full statutory term which may ultimately result from United States Patent No. 6,627,695.

The Claimed Invention is Patentable
in Light of the Remaining Art of Record

Claims 1 through 4, 5, 13, 19 and 21 stand rejected over United States Patent No. 6,436,219 ("US 219") to Francis in view of EP 0 942 031 A ("EP 031") to Miki. Claim 20 stands rejected over the preceeding references and further in view of United States Patent No. 4,480,674 ("US 674") to Uehara et al. Claims 5 through 7, 11 and 12 stand rejected over US 219 in view of EP 031 and further in view of United States Patent No. 4,415,684 to Lai et al. ("US 684"). Claims 8 through 10 stand rejected over the immediately

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preceding references and further in view of United States Patent No.
4,033,936 ("US 936") to Bollert et al.

It may be useful to consider the invention before addressing the merits of
the rejection.

White films are generally known. The whiteness of such films is generally
less than 80 %. In addition, known white films also have an undesirable yellow
tinge, i.e. they are not brilliant white. Conventional white films typically exhibit a
Yellowness Index of more than 45 for films of from 10 to 100 microns in
thickness, for example. (The Examiner's attention is kindly directed to the
Application-as-filed on Page 2, lines 13 – 17).

Quite unexpectedly, Applicants have found that white films exhibiting
superior properties, i.e. high whiteness and low yellowness index, can be
produced by combining rutile-type titanium dioxide as white pigment, at least one
optical brightener and, preferably, at least one soluble blue dye.

Accordingly, the claims are directed to white, biaxially oriented films
having a thickness of from 10 to 500 microns that exhibit a whiteness of 80 % or
more, a light transmittance of up to 85 % and a Yellowness Index of less than or
equal to 30. The white films of the invention advantageously include coloring
agent consisting essentially of rutile-type titanium dioxide and blue dye(s), along
with at least one optical brightener.

The cited references do not teach or suggest the claimed invention.

US 219 is directed to multilayered opaque photographic substrates which
include a black or grey layer, along with a white layer. (Col. 3, lines 30 – 33 and
Col. 3, lines 48 – 49). The black layer purportedly improves upon conventional

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white films, which are said to allow "some light" to pass through the film. (Col. 1, lines 49 – 53). Carbon black is the preferred coloring agent for use within the opaque black/grey layer. (Col. 3, lines 30 – 33). US 219 is altogether silent as to the yellowness properties of the resulting films.

Accordingly, US 219 does not teach or suggested the recited films that include coloring agent consisting essentially of rutile-type titanium dioxide and blue dye. In fact, US 219 strongly teaches away from such films by requiring the presence of a black or grey layer. And US 219 further does not teach or suggest such films exhibiting a whiteness of 90 % or more in combination with a Yellowness Index of less than or equal to 30.

Furthermore, in contrast to the opinion urged within the Office Action, US 219 does not teach or suggest the recited films exhibiting a light transmittance of up to 85%. Applicants respectfully reiterate that US 219, solely directed to opaque films, strongly teaches away from such light transmitting films. The stated purpose of US 219 is to avoid the passage of light through the resulting film. Consequently the films of US 219 are required to be opaque, i.e. have minimal (if any) light transmission, as correctly noted by the Examiner.

Applicants further respectfully reiterate that US 219 does not teach or suggest films advantageously including flame retardant, as recited in Claims 5 and 8 through 10. Nor does US 219 teach or suggest the beneficial use of hydrolysis stabilizer, as recited in Claims 11 and 12. US 219 further does not teach or suggest the advantageous thermoformable films of the invention, including 1 % by weight or more of polyethylene glycol, as recited in Claim 21.

EP 031 does not cure the deficiencies within US 219. EP 031 is directed to white films with low lead content, for use in prepaid cards. (Paragraphs 0004 and 0028). EP 031 discloses a laundry list of appropriate white pigments,

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Including titanium dioxide. (Paragraph 0025). EP 031 expressly remarks that rutile-type titanium dioxide has a "more yellowish color as compared to anatase-type titanium dioxide." Due to the yellowness of rutile-type titanium dioxide, EP 031 employs anatase-type titanium dioxide "to obtain a good whiteness." (Paragraph 0046). In contrast to the opinion urged within the Office Action, examples disclosing the use of rutile-type titanium dioxide alone, i.e. Examples 1 and 2, are not evaluated as "showing a high whiteness." Rather, they were merely evaluated to have low lead content and be capable of maintaining a design value. (Paragraphs 0070 – 0073 and Table 1). The "high whiteness values" noted within Table 2 of EP 031 are from multilayered films including a mixture of rutile and anatase –type titanium dioxides. (Paragraphs 0076; 0077; 0084 and Table 2) In fact, EP 031 expressly attributes the "high whiteness" in these mixed oxide films from the layer including anatase-type titanium dioxide. (Paragraph 0079 in conjunction with Table 2).

Accordingly, EP 031 does not teach or suggest films incorporating the recited white pigment consisting essentially of rutile-type titanium dioxide that exhibit a whiteness of 90 % or more. In fact, considered as a whole, EP 031 teaches away from such films by recommending anatase-type titanium dioxide to form films having high whiteness.

And EP 031 most certainly does not teach or suggest the recited films incorporating a combination of white pigment consisting essentially of rutile-type titanium dioxide and optical brightener that exhibit a Yellowness Index of less than or equal to 30. EP 031 actually teaches away from such films by expressly noting that rutile-type titanium dioxide leads to elevated yellowness values. Considered differently, the rutile-type titanium dioxide containing films of EP 031 would not possess the characteristics of the claimed invention.

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EP 031 further does not teach or suggest films advantageously including flame retardant, as recited in Claims 5 and 8 through 10. Nor does EP 031 teach or suggest the beneficial use of hydrolysis stabilizer, as recited in Claims 11 and 12. EP 031 also does not teach or suggest the advantageous thermoformable films of the invention, including 1 % by weight or more of polyethylene glycol, as recited in Claim 21.

Applicants respectfully reiterate that there would have been no motivation to have combined US 219 and EP 031. US 219 is directed to photographic sheets having increased opacity. EP 031 is directed to pre-paid cards having a lower lead content. In contrast to the opinion urged within the Office Action, these are altogether different endeavors.

However, even if combined (which Applicants submit should not be done), the claimed invention would not result. US 219 requires grey or black colorants within its opaque films. EP 031 employs anatase-type titanium dioxide to form high whiteness films and teaches that rutile-type titanium dioxide produces yellow films. Consequently, even if combined, the recited films incorporating optical brightener and coloring agent consisting essentially of white-pigment consisting essentially of rutile-type titanium dioxide and blue dye, in which the film exhibits a light transmittance of up to 85%, a whiteness of 90 % or more and a Yellowness Index of less than or equal to 30 would not have resulted.

Accordingly, Applicants respectfully submit that Claims 1 through 4, 5, 13, 19 and 21 are patentable in light of US 219 and EP 031, considered either alone or in combination.

Claim 20 is likewise patentable in light of the foregoing references and US 674.

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US 674 is directed to photosensitive coating compositions for use on lithographic printing plates that can improve the sensitivity of a quinonediazide type photosensitive material. (Col. 1, lines 6 - 8 and Col. 2, lines 18 - 20). The compositions include one or more of a gallic acid derivative or naphthoquinone or derivatives thereof. (Col. 2, lines 28 - 50 and Col. 4, lines 27 - 45). The compositions may also include any of a laundry list of additives, including fillers, surfactants and dyes. (Col. 5, lines 3 - 9). The compositions are applied as a coating onto a variety of suitable supports, including aluminum plates and the like. (Col. 5, lines 24 - 36).

Accordingly, in contrast to the opinion urged within the Office Action, US 674 does not teach or suggest the recited biaxially oriented films containing blue dye, much less the biaxially oriented films incorporating the 1, 4-bis-(butylamino)-anthraquinone dye of Claim 20.

There would have been no motivation to have combined US 219, EP 031 and US 674. US 219 is directed to photographic sheets having greater opacity. EP 031 is directed to pre-paid cards having a low lead content. US 674 is directed to coating compositions containing gallic acid or naphthoquinone. These are altogether different endeavors..

However, even if combined (which Applicants submit should not be done), the claimed invention would not result. As noted above, US 219 requires grey or black colorants within its opaque films. EP 031 employs anatase-type titanium dioxide to form high whiteness films. US 674 is directed to coating compositions. Consequently, even if combined, the recited biaxially oriented films having a whiteness of 90% or more and a light transmittance of up to 85% that incorporate white-pigment consisting essentially of rutile-type titanium dioxide and 1, 4-bis-(butylamino)-anthraquinone dye would not have resulted.

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Accordingly, Applicants respectfully submit that Claim 20 is patentable in light of US 219, EP 031 and US 674, considered either alone or in combination.

Claims 5 through 7, 11 and 12 are likewise patentable in light of the art of record.

US 684 is generally directed to hindered amine UV light stabilizers. (Col. 1, lines 53 – 54). The hindered amines may be incorporated into any "low or high molecular weight materials," including oils and monomers. (Col. 8, lines 13 – 21). The light stabilizers may also be incorporated into a broad list of polymeric substrates, including polyhydrocarbons, polyamides and cellulose ethers. (Col. 3, lines 15 – 24).

Applicants respectfully reiterate that there would have been no motivation to have combined US 219, EP 031 and US 684. The issues addressed in each of these references, i.e. opacity, low lead content and UV resistance, are altogether different.

However, even if combined (which, again, Applicants submit should not be done) the claimed invention would not result. Again, US 219 requires grey or black colorants within opaque films. EP 031 employs anatase-type titanium dioxide to form high whiteness films. US 684 is directed to particular UV stabilizers. Consequently, even if combined, the recited biaxially oriented films having a whiteness of 90% or more and a light transmittance of up to 85% that incorporate white-pigment consisting essentially of rutile-type titanium dioxide and the recited stabilizers would not have resulted.

Accordingly, Applicants respectfully submit that Claims 5 through 7, 11 and 12 are patentable in light of US 219, EP 031 and US 684, considered either alone or in combination.

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Applicants similarly respectfully submit that Claims 8 through 10 are patentable in light of the art of record.

US 936 is directed to polyester resins that have been reacted with particular phosphorus compounds, i.e. the phosphorous compounds are chemically bonded to the polymer chain. (Col. 1, lines 35 – 54). US 936 merely broadly notes that the flame-retardant polyesters may be processed into filaments, fibers, sheets or shaped articles. (Col. 1, lines 54 - 55). US 936 then goes on to note that the flame retardant polyesters may be used to form fabrics, carpets and the like. (Col. 1, lines 60 – 63).

Applicants respectfully reiterate that there would have been no motivation to have combined US 219, EP 031, US 684 and US 936.

However, even if combined (which Applicants submit should not be done), the claimed invention would not result. US 219 requires grey or black colorants within opaque films. EP 031 employs anatase-type titanium dioxide to form high whiteness films. US 684 is directed to particular UV stabilizers. US 936 bonds particular flame retardants to the polymer chain. Consequently, even if combined, the recited biaxially oriented films having a whiteness of 90% or more and a light transmittance of up to 85% that incorporate white-pigment consisting essentially of rutile-type titanium dioxide and a flame retardant dissolved within the thermoplastic would not have resulted.

Accordingly, Applicants respectfully submit that Claims 8 through 10 are patentable in light of US 219, EP 031, US 684 and US 936 considered either alone or in combination.

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CONCLUSION

It is respectfully submitted that Applicants have made a significant and important contribution to the art, which is neither disclosed nor suggested in the art. It is believed that all of pending Claims 1 through 13 and 19 through 24 are now in condition for immediate allowance. It is requested that the Examiner telephone the undersigned if any questions remain to expedite examination of this application.

It is not believed that fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional fees are necessary to allow consideration of this paper, the fees are hereby authorized to be charged to Deposit Account No. 50-2193.

Respectfully submitted,

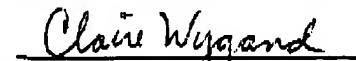


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CERTIFICATE OF FACSIMILE TRANSMISSION

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